

EX  
CONC

c) each contact [formed with] including a bump having a [at least one raised portion, each] raised portion formed of a conductive material extending from a surface of the bump [of the contact] and adapted to penetrate a respective contact location on the die[,] for establishing an ohmic contact therewith [at said contact locations], said [contact] bump and raised portion formed and dimensioned so that, when the die and the substrate are biased together in the testing apparatus with a predetermined biasing force [is applied to the contact], the raised portion will penetrate the [its respective] contact location[s] to a limited penetration depth, while [the contact] the surface of the bump abuts the contact location[, thereby limiting penetration depth at the contact location];

d) a plurality of conductive traces formed on the substrate and electrically connected to the raised portion of the contacts; and

e) means for providing an electrical path between the conductive traces and leads of the testing apparatus.

46. (twice amended) An attachment member [for use with a semiconductor integrated circuit die] as described in claim 44, and wherein:

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said [contacts are formed as bumps and each] raised portion is formed as a point of a same material as the substrate.

47. (twice amended) An attachment member [for use with a semiconductor integrated circuit die] as described in claim 44, and wherein:

said substrate is formed of a material selected from the group of materials consisting of silicon, germanium, silicon on sapphire, silicon on glass and a ceramic.

Sub 73  
48. (amended) An attachment member [for use with a semiconductor integrated circuit die] as described in claim 44, and further comprising:

forming the plurality of contacts [being formed] of semiconductor material [by] using semiconductor circuit fabrication techniques.

49. (amended) An attachment member [for use with a semiconductor integrated circuit die] as described in claim 48, and further comprising:

forming the substrate and the plurality of contacts [being formed of a structure which includes] out of silicon [material], and forming the circuit traces [being formed] on the substrate [silicon material by] using semiconductor fabrication techniques.

Sub 74  
Bond  
72. (amended) An attachment member for electrically connecting an unpackaged [a discrete] semiconductor die to a testing apparatus, said attachment member comprising:

a substrate formed of a semiconductor material;

a contact formed on the substrate corresponding to a [bondpad] contact location on the die, said contact including a bump projecting from a surface of the substrate and including at least one raised portion formed of a conductive material and projecting from a surface of the bump, said [contact] bump and raised portion formed and dimensioned such that [upon application of] when the die and the substrate are biased together in the testing apparatus with a predetermined biasing force the raised portion will pierce the [bondpad] contact location to establish an ohmic contact therewith while the [contact] surface of the bump abuts a surface of the contact location [the bondpad] to limit penetration of the raised portion into the contact location [and prevent damage to the bondpad]; and